

LO-FI

A DISTORTED, GRITTY, MANGLED PRODUCER TOOLKIT

INFORMATION

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1. GETTING STARTED

Welcome to Lo-Fi, powered by our advanced sample engine software, Opus.

1.1 LO-FI

Experience lofi beyond convention with this expansive collection of meticulously crafted instruments, each delivering a unique sonic footprint through creative pitch-shifting, degradation, and drive - perfect for hip hop, EDM, and more!

1.2 ABOUT THE TEAM

Produced by sound titan Doug Rogers, rising star engineer and producer Eden Eliah Nagar, and Blake Rogers.

1.3 SUPPORT

Visit our Support Center to Live Chat with a Support Agent, or watch videos on installation and setup, product trailers, walkthroughs, and more.

1.1 LO-FI

Step beyond the conventions of traditional producer toolkits into a world where dark, gritty textures and edgy, distorted sounds meet modern production. Lo-Fi is designed for producers seeking bold new territory, where intentional imperfection and extreme processing have creatively reshaped sounds through pitch shifting, distortion, and degradation. Enter a world where everything from synths and keys to orchestral textures and guitars have been transformed into dynamic, expressive instruments.



Nearly 350 instrument presets have been meticulously crafted beyond conventional territory into an exciting and diverse palette of sounds, from deep, sub-rattling basses and distorted drum kits, to haunting, textural soundscapes and hazy, atmospheric pads. These instruments are ready out of the box, or can be further customized using the cutting-edge effects in the revolutionary Opus software that powers Lo-Fi.



1.1.1 WELCOME

Every instrument in this collection is designed to inspire today's music, film, and game music creators to push beyond the limits of traditional genres into raw, unfiltered sonic territory. Each sound has been reshaped far beyond its original character into its own unique sonic footprint, designed to spark creativity from the first note.

EASTWEST SOUNDS VIDEO: [LO-FI WALKTHROUGH](#)



MAIN FEATURES

Lo-Fi delivers a transformative tool for creators that crave something beyond the predictable, who seek to break through the clean confines of typical libraries into a world of deep sonic experimentation. Whether you're crafting hip-hop beats with raw, distorted energy, atmospheric soundtracks with haunting textures, or experimental electronic tracks that defy convention, Lo-Fi is the perfect tool that offers an exciting array of unrestrained sounds.

- **EXTREME PROCESSING** saturates every sound with bit-crushing, pitch manipulation, and degradation to deliver gritty, mangled character, transforming traditional tones into raw, speaker-rattling powerhouses.
- **DIVERSE LINEUP** of edgy, distorted instruments – growling basses, fractured drums, eerie pads, and mangled orchestral stabs – processed to their limits for a one-of-a-kind production toolkit that spans hip-hop, electronic, and beyond.
- **CUTTING EDGE EFFECTS** enhance sounds with dual high-pass and low-pass filters to shape tones, ring modulation that injects metallic shimmer, and auto panner, chorus, and phaser effects that widen and swirl tones into hypnotic, otherworldly spaces, while reverb and delay add a final layer of depth.
- **MODULATION OPTIONS** bring movement to the dual filters and ring modulation effects by using LFO, step LFO, envelope, or velocity to create rhythmic complexity and add evolving dynamics.
- **POWERFUL ARPEGGIATOR** builds cascading patterns with velocity-driven intensity, blending synced or free-flowing rates with or without swing, and an adjustable gate. Pair it with portamento to stretch notes into mesmerizing, elastic musical lines.
- **MACRO FX PAD** transforms sounds by manipulating multiple parameters simultaneously using an XY pad for ultimate creative control, letting you distort, widen, pulse and spatialize sounds in real-time for bold, unpredictable results.

POWERED BY THE REVOLUTIONARY OPUS SOFTWARE

Opus is the revolutionary software engine that powers all EastWest virtual instruments. It is faster, more powerful, more flexible, and better looking than the previous generation software engine, and it comes with some incredible new features.

EASTWEST SOUNDS VIDEO: [OPUS SOFTWARE WALKTHROUGH](#)

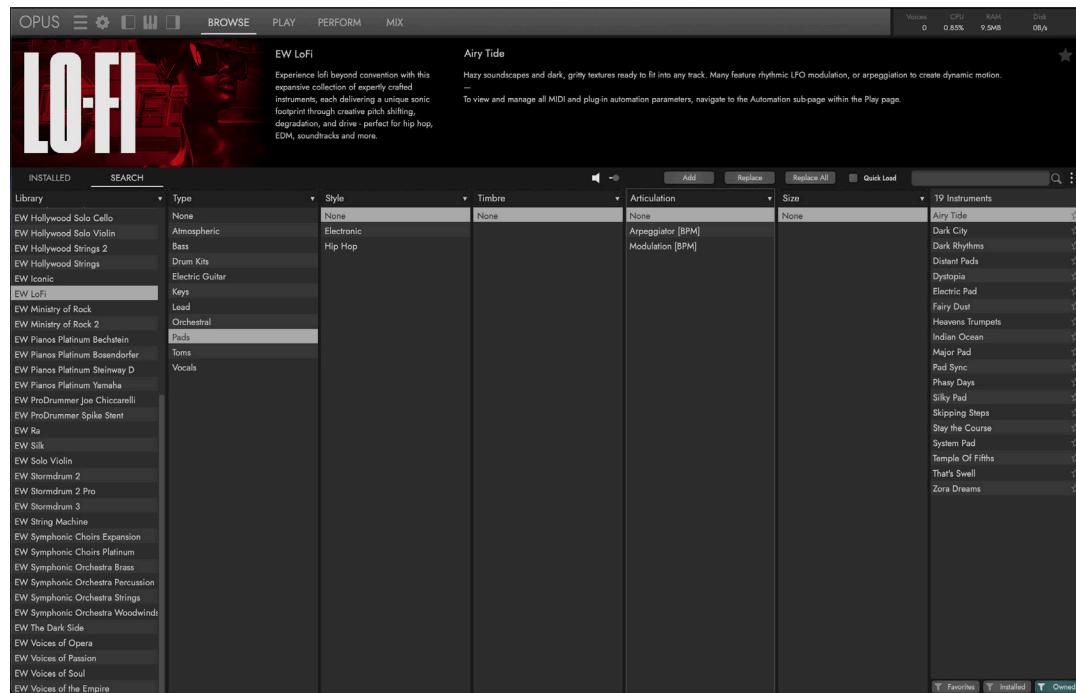


Below is a brief list of some of the main features of the Opus software engine. Refer to the Opus Software Manual for more in-depth coverage of all the powerful controls and features available in Opus.

- **FAST AND EFFICIENT PERFORMANCE** was a top priority as Opus was being developed from the ground up. With an emphasis on achieving the most efficient use of computer resources possible, it is the fastest sample engine on the market. Opus runs natively on Apple's Silicon Processors, and Intel-based Macs, and is compatible with the latest Mac and Windows operating systems.
- **HIGH RESOLUTION USER INTERFACE** are now available for all EastWest products in Opus. The high resolution (retina) user interfaces are also scalable to any size, providing ultimate flexibility when used with high-resolution computer monitors.
- **A POWERFUL SCRIPTING LANGUAGE** is an essential part of overall instrument design. It is used to model instrument behavior, define user interac-

tion, and implement sonic features not possible to achieve otherwise. Opus features a powerful script language called OpusScript developed by Wolfgang Schneider, the creator of Kontakt. It empowers sound designers to express their ideas, and deploy actual functionality and behavior beyond what the underlying software contains.

- **INSTRUMENT DOWNLOADS** mean you no longer have to wait hours for large libraries to download. Instruments can now be downloaded individually at the speed of your internet connection. With Audio Previews you can audition a sound, download it, and be playing in minutes!



- **CUSTOM KEYSWITCHES** allow users to build their own keyswitch instruments, and the ability to create multi-articulation instruments with a variety of options to switch between articulations on the fly. Trigger Options include Keyswitches, Continuous Controllers (CCs), Velocity, Program Changes, and more!
- **ADVANCED AUTOMATION** options come pre-configured on a per-instrument basis, with custom settings tailored to that instrument or library's unique features. Users are also free to configure their own automation settings by adding automation parameters and macro parameters, the latter of which controls multiple targets with a single macro. Existing MIDI Controller Mapping assignments can also be re-mapped to any freely available MIDI CC assignment you like.
- **MULTI-INSTRUMENT SETUPS** are easier than ever to manage thanks to a dedicated area of the user interface that handles these 'Performances'. Use an array of controls and options that allow you to customize how multiple instrument interact with each other including defining octaves, key ranges, trigger actions, and more.

1.1.2 WALKTHROUGH

This section is for new users of the Opus software, the sample engine software that powers Lo-Fi and all other EastWest virtual instruments.



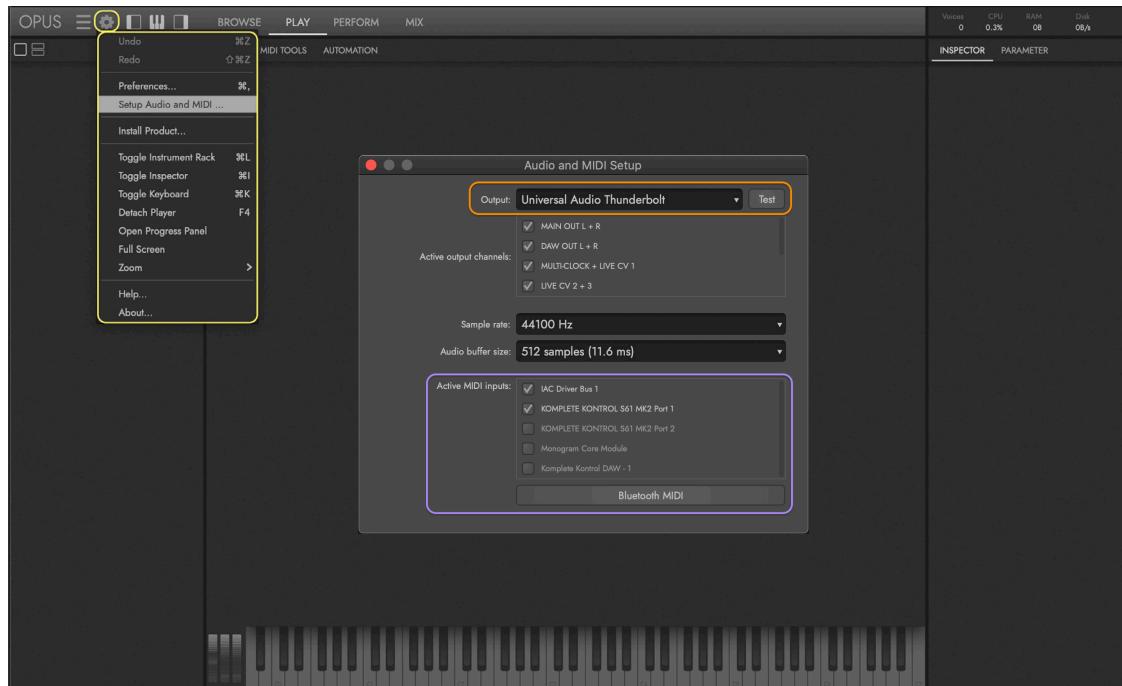
It covers the initial steps of setting up Opus, loading your first instrument, using the controls to alter the sound, building various multi-instrument setups, and polishing off the sound with mixing and effects.

- **INITIAL SETUP** involves a few steps to optimize settings, setup audio and midi devices, and run the latest automatic updates.
- **USER INTERFACE** An overview of navigating the Opus software's user interface.
- **LOADING AN INSTRUMENT** is easy using the features found in the Browse page, where you can search for instrument, audition sounds, and load instrument(s).
- **PLAYING AN INSTRUMENT** is intuitive as ever by using a library's custom user interface and set of controls available in the Play page and its series of sub-pages: Player (default), MIDI Tools, Automation, and Articulations.
- **BUILDING A PERFORMANCE** Create multi-instrument setups (splits, stacks, key-switches) in moments by modifying instrument properties using controls like key range, octave, and trigger actions to shape and control them in a variety of ways.
- **MIXING AND EFFECTS** can be applied to an instrument (or its individual microphone positions) using a suite of effects covering every category, adding extra polish to the final output with eq, compression, chorus, reverb, delay, and more.

INITIAL SETUP

Before diving in, a few steps are required to optimize and setup Opus for use.

1. **THE SETUP WIZARD** dialog appears the very first time Opus is launched. Follow the series of prompts to help optimize the CPU and disk performance of Opus based on your workflow and computer's specifications. This can be changed at any time in Preferences.
2. **RUN THE AUTO UPDATE** upon launching Opus if the 'Updates Available' prompt appears. It should only take a few seconds to complete.
3. **AUDIO AND MIDI DEVICES** can be selected in the **SETTINGS MENU** by selecting the **SETUP AUDIO AND MIDI OPTION** from the list.
 - (A) Select an audio device from the **OUTPUT MENU**, and test the connection by clicking the **TEST BUTTON** to send a test tone.
 - (B) In the **ACTIVE MIDI INPUTS AREA** check the box next to any available MIDI device(s) you wish to enable.



OPUS SOFTWARE MANUAL | SECTION 1.1.3 PREFERENCES contains more information about the settings available in the preferences window.

USER INTERFACE

The Opus user interface is divided into 6 main areas (some initially hidden from view).

At the top is the **NAVIGATION BAR AREA** that contains important menus and buttons to access all the main areas of the Opus user interface. From left to right that includes:

- The **OPUS BUTTON** prompts an ‘About’ window to appear with software information.
- The **MAIN MENU OPTIONS** (horizontal lines) are related to saving and opening instruments and performances, and the **SETTINGS MENU OPTIONS** (gear icon) contain preferences for audio and MIDI, and more.
- The **INTERFACE TOGGLES** show and hide parts of the Opus user interface: the Instrument Rack (left), the Virtual Keyboard (middle), and the Inspector (right).
- The **PAGE SELECTORS** switch the **MAIN DISPLAY AREA** between the Browse, Play (shown below), Perform, and Mix pages.



The **INSTRUMENT RACK AREA** populates with loaded instruments, and includes basic controls for volume, pan, solo / mute, and more. Further details are contained in the section below.

The **VIRTUAL KEYBOARD AREA** shows the selected instrument’s sampled key range, pitch wheel, modulation wheel (CC 1), and expression wheel (CC 11).

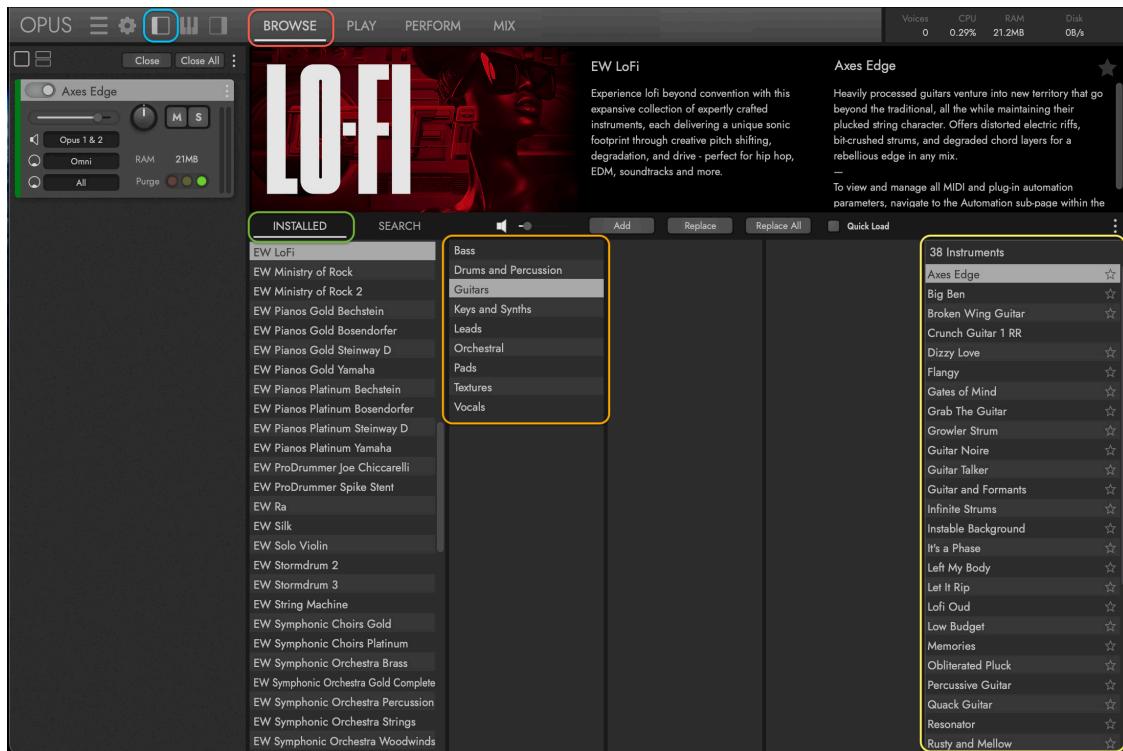
The **SYSTEM USAGE AREA** area provides real-time stats related to the number of simultaneous voices, CPU usage, RAM usage and disk usage.

The **INSPECTOR AREA** shows information pertaining to the current selection, whether it’s an instrument selected in the Browse page, or a channel selected in the Mix page. Please see the Opus software manual for more information.

LOADING AN INSTRUMENT

The Browse page is where instruments can be searched for, auditioned and loaded.

1. Click the **BROWSE PAGE SELECTOR** in the **NAVIGATION BAR** to enter the Browse page.
2. Click the **INSTRUMENT RACK BUTTON** in the **NAVIGATION BAR** to see the Instrument Rack, where loaded instruments populate with controls like volume, pan, and more.



3. Click the **INSTALLED MODE BUTTON**, then click on ‘EW LoFi’ in the list of installed libraries that appear in the left column.
4. Click on one of the **MAIN CATEGORIES** that includes: **BASS, DRUMS AND PERCUSSION, GUITARS, KEYS AND SYNTHS, LEADS, ORCHESTRAL, PADS, TEXTURES, or VOCALS**. Each contain fresh, cutting-edge presets for modern genres.
5. Instruments will appear in the **RESULTS LIST COLUMN**, where you can double-click on one to load it, and double-click another one to replace it. Hold the [option/alt] key while you double-click to add an instrument, instead of replacing it.

CONTINUE READING | SECTION 2.1 LO-FI INSTRUMENTS for more information about the instruments available in Lo-Fi, and the ways to search for them.

PLAYING AN INSTRUMENT

Each product has a unique set of controls and features, accessible in the Play page and its series of sub-pages: Player (default), MIDI Tools, Automation, and Articulation.

1. Click the **PLAY PAGE SELECTOR** in the **NAVIGATION BAR** to enter the Play page.
2. Click the **PLAYER SUB-PAGE SELECTOR** in the **PALETTE MENU** to see the custom user interface for the loaded and currently selected instrument.
3. Use the **INSTRUMENT SELECTOR** to view the currently selected instrument, and to change the instrument selection using the up and down arrows (you can also use the up/down arrow keys on your keyboard).



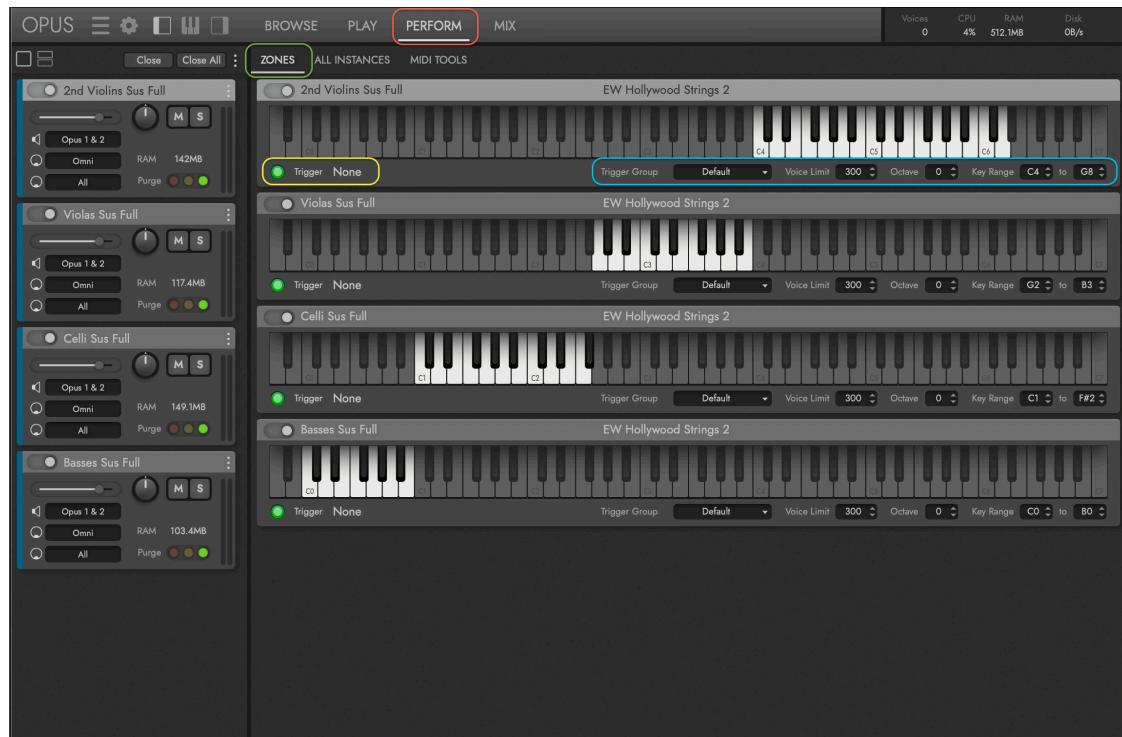
4. Manipulate the sound by modifying the control on the user interface by clicking with your mouse, or continue reading the manual for details on manipulating controls in real-time using MIDI CCs.

CONTINUE READING | SECTION 2.2 LO-FI CONTROLS for more details about the controls available to manipulate an instrument's sound.

BUILDING A PERFORMANCE

Create multi-instrument setups (or ‘performances’) by defining a variety of parameters that control how the individual instruments interact with each other.

1. Click on the **PERFORM PAGE SELECTOR** in the **NAVIGATION BAR** to enter the Perform page after loading multiple, individual instruments (or a single performance).
2. The **ZONES SUB-PAGE SELECTOR** is the default selection in the **PALETTE MENU**, and displays the instrument properties for all instruments, enabling you to quickly build multi-instrument setups, called performances.



3. Use the **INSTRUMENT PROPERTIES SETTINGS** to create multi-timbre instruments like keyboard splits and stacks by using key range, octave, and more.
4. Use the **MIDI TRIGGER OPTIONS** to create multi-articulation instruments that use various trigger options, like keyswitches, to switch between them.

PLEASE NOTE: Several EastWest libraries feature custom sub-pages that are available in the Perform page after loading a special performance file. For example, Hollywood Fantasy Orchestra features the Fantasy Orchestrator sub-page, which is detailed in its respective manual.

OPUS SOFTWARE MANUAL | SECTION 2.3 THE PERFORM PAGE for more about the sub-pages and controls available to manage multi-instrument performances.

MIXING AND EFFECTS

Craft the final sound of an instrument's output using mix controls and a suite of powerful effects processors.

1. Click the **MIX PAGE SELECTOR** in the **NAVIGATION BAR** to enter the Mix page to change the selected instrument's mix and effect settings
2. The **EFFECTS AREA** occupies the top half of the Mix page, and displays the insert effects loaded on the selected channel (by default, the Master channel).



3. The **MIXER AREA** is located in the bottom-half of the Mix page, and populates with a standard mixer channel setup for Lo-Fi: a Master channel with a host of insert effects, and 2 FX Bus channels with reverb and delay send effects inserted respectively. Many of these effects can also be controlled in the Play page.

OPUS SOFTWARE MANUAL | SECTION 2.4 THE MIX PAGE for details about how to mix and finalize an instrument's output.

WHERE TO LEARN MORE

To learn more about the Opus Software, beyond that specifically related to Lo-Fi, please refer to the Opus Software Manual. It covers all aspects of the Opus software's feature set, controls, and options.

Access the Opus Software Manual within the Opus software itself by clicking on the **SETTINGS MENU BUTTON** in the top-left corner of the Navigation Bar, and selecting the **HELP OPTION** that appears at the bottom of the menu.



This Lo-Fi user manual contains references to sections within the Opus Software Manual (example shown below), where topics beyond the scope of this product are expanded upon.

OPUS SOFTWARE MANUAL | SECTION 1.1.3 PREFERENCES contains more information about the settings available in the preferences window.

1.1.3 WHAT'S INCLUDED

EastWest's Lo-Fi includes:

- A collection of 344 presets (instruments and performances)
- Approximately 23 Gigabytes (GB) of 24-bit, 44.1 kHz samples
- EastWest's powerful Opus software engine.
- A license that identifies the product you bought.
- An EW Lo-Fi User Manual.pdf
- An Opus Software Manual.pdf
- The EW Installation Center to setup the libraries, software, and documentation

A NOTE ABOUT ILOK

An iLok account is required for a machine-based (electronic) license to be placed on your computer. You may also place the license on an optional iLok 2 or 3 key. The iLok 1 key is no longer supported.

PLEASE NOTE: Due to the age and release date of this hardware, the iLok 1 key is no longer supported by the latest iLok License Manager, Opus software, and Installation Center software. It will result in very slow loading speeds, or the programs not locating the libraries. Please move your licenses either to your computer as a Machine License or to an iLok 2 or 3 key. Simply having the iLok 1 key plugged in to your computer is known to also exhibit this limiting behavior.

REQUIRED INTERNET CONNECTION

An Internet connection is required for several things:

- The first time download of the EW Installation Center and Opus software
- The first time activation of perpetual licenses
- To use the 'Auto Update' feature in Opus
- The renewed activation of subscription licenses (ComposerCloud)
- The download of EastWest Libraries (see below for other options)

Once everything is setup, you will only need a connection once per month so that the license remains active. If you're not active and the sync doesn't happen automatically, you will need to deactivate, then reactivate the license using the iLok License Manager.

1.1.4 SYSTEM REQUIREMENTS

The minimum and recommended hardware and software specifications for running Opus (version 1.5 and above) on Windows and macOS systems are stated below.

The Opus software must be installed on an operating system drive, and that drive must be formatted in an operating system's native file format to prevent installation issues and largely inflated file sizes. Use NTSF format for Windows drives, Mac OS Extended (Journaled) for macOS 12 and below, and APFS for macOS 13 and above.

MINIMUM SPECIFICATIONS

- CPU: Quad-core (four cores), running at 2.7 GHz (or above)
- RAM: 16 GB
- OS: macOS 10.15 (Catalina) and above; Windows 10 and above (with ASIO sound drivers)
- Drive: HDD (7200 rpm, non-energy saving)

RECOMMENDED SPECIFICATIONS

- CPU: Octa-core (eight cores), running at 2.7 GHz (or above)
- RAM: 32 GB or more
- OS: macOS 10.15 (Catalina) and above; Windows 10 and above (with ASIO sound drivers)
- Drive: SSD (SATA or PCIe)

PLEASE NOTE: Opus runs natively on Apple silicon ARM CPUs (M1, M2, M3, etc.), and Intel-based Macs.

1.2 ABOUT THE TEAM

Lo-Fi was produced by sound titan Doug Rogers, rising star engineer/producer Eden Eliah Nagar, and Blake Rogers.

1.2.1 DOUG ROGERS

With over three decades of experience in the audio industry, founder and producer Doug Rogers is the recipient of many industry awards including “Recording Engineer of the Year”. “The Art of Digital Music” named him one of “56 Visionary Artists & Insiders” in the book of the same name.



In 1988 he founded EastWest, the most critically acclaimed virtual (software) instrument developer in the world. Since then, EastWest has been the recipient of over 120 international industry awards. Rogers uncompromising approach to quality, and innovative ideas has enabled EastWest to lead the industry for over 30 years.

After forming EastWest, he produced the very first commercial drum samples collection, followed with a sequel co-produced with Bob Clearmountain, which was so successful a new industry was born. Rogers and Clearmountain produced subsequent releases that won many awards. In 1991, Rogers released the first collection to include MIDI driven drum loops, which enabled users to adjust each loop tempo in their sequencer without adjusting pitch or decreasing quality.

With sampling technology improving, Rogers released the Ultimate Piano Collection in 1995, the first multi-velocity sampled piano collection, which received many industry awards. In 1997 Rogers partnered with Nemesys to create the GigaSampler software and instrument collections, which pioneered the use of “streaming from hard drive technology”, a technical breakthrough without which, the high quality virtual instruments of today would not be possible.

In 2003 he co-produced with Nick Phoenix the first surround sound virtual orchestra, Symphonic Orchestra, engineered by 11-time Grammy nominated classical recording engineer Keith Johnson, and recorded in a ‘state of the art’ concert hall (awarded Keyboard Magazine “Key Buy Award,” EQ Magazine “Exceptional Quality Award,” Computer Music Magazine “Performance Award,” and G.A.N.G. [Game Audio Network Guild] “Best Sound Library Award”); and followed that release with Symphonic Choirs (awarded Electronic Musician “2006 Editor’s Choice Award,” G.A.N.G. “Best Sound Library Award,” and Keyboard Magazine “Key Buy Award”). Symphonic Choirs and it’s predecessor Voices of the Apocalypse were the first music software products to enable users to type in words for the choirs to sing in any key with a computer. This was followed in 2007 with EastWest/Quantum Leap Pianos, the most detailed virtual piano collection ever produced, also in surround sound.

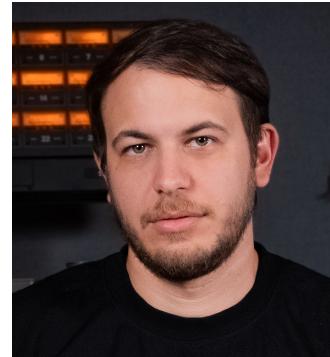
In 2005 Rogers established a software development division for EastWest, and released the first 64-bit virtual instruments that became the new standard. Rogers most

recent productions include Lo-Fi and Iconic; Hollywood Strings 2, Hollywood Fantasy Orchestra, Forbidden Planet, co-produced with Nick Phoenix; Hollywood Orchestra Opus Edition, co-produced with Nick Phoenix; Hollywood Orchestrator, co-produced with Sonuscore; Hollywood Backup Singers, co-produced with Nick Phoenix; Voices Of Opera featuring Larisa Martinez (Andrea Bocelli's soprano) and Carlton Moe (Phantom of the Opera tenor), co-produced with Nick Phoenix; Voices Of Soul featuring C.C. White, co-produced with Nick Phoenix; Hollywood Choirs, co-produced with Nick Phoenix; Spaces II Reverb, co-produced with Nick Phoenix; Voices Of The Empire featuring Uyanga Bold, co-produced with Nick Phoenix; EastWest MIDI Guitar Series, co-produced with Nick Phoenix; ProDrummer 1, co-produced with Mark "Spike" Stent; ProDrummer 2, co-produced with Joe Chiccarelli; Ghostwriter, co-produced with Steven Wilson; Hollywood Solo Violin, Hollywood Solo Cello, and Hollywood Harp, co-produced with Nick Phoenix; Hollywood Strings, Hollywood Brass, Hollywood Orchestral Woodwinds, and Hollywood Orchestral Percussion, co-produced with Nick Phoenix and Thomas Bergersen. The Dark Side, co-produced with David Fridmann; and Fab Four with Beatle's engineer Ken Scott, inspired by the sounds of the Beatles. Both Fab Four and The Dark Side won M.I.P.A Awards, judged by over 100 international music magazines. EastWest has won 3 out of the last 5 NAMM TEC Awards for Best Musical Instrument Software.

1.2.2 EDEN ELIAH NAGAR

Eden Eliah Nagar is a rising star engineer and producer, having worked with many top artists in the Hip hop, R&B, Afro beats, and Pop genres including IDK, MF Doom, Young Thug, Gunna, Musiq Soulchild, Burna Boy, Kaytranada, producer and engineer Mike Dean, and many more.

Eden was a producer for EastWest's groundbreaking Iconic synth. He was the driving force in helping to shape and process the sounds for Lo-Fi, bringing years of sound design experience and expertise.



1.2.3 BLAKE ROGERS

Blake Rogers has been part of the EastWest production team since Hollywood Choirs. As a project coordinator, he contributed to the development of additional products Hollywood Orchestra Opus Edition, Forbidden Planet, Hollywood Fantasy Orchestra, Hollywood Strings 2 and was a producer on Iconic.

For Lo-Fi, he used his extensive knowledge of music history to help curate hundreds of instruments and presets.



1.3 SUPPORT

This section provides links to a variety of help resources where you can go to get help if you encounter trouble installing your product, want to know more about a product's features, or are interested in composing tips.

1.3.1 ONLINE RESOURCES

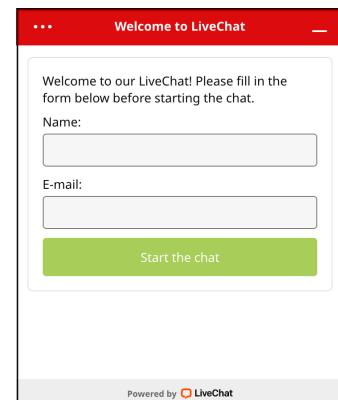
The [EastWest Support Center](#) allows you to:

- Live Chat with a Support Agent
- Download Software and Product Updates
- View and download manuals, guides, and FAQs

LIVE CHAT WITH A SUPPORT REP

EastWest's Support Center offers Live Chat, the fastest way to reach a Support Team Member to help resolve any technical issues you may be having.

Click on the red “Chat Now” box that appears in the lower-right corner. Fill in your name and email address, then click “Start the Chat”, or if an agent is not available click “Leave a Message” by explaining your issue, and a Support Agent will respond as soon as they're available.



The image shows a screenshot of a LiveChat interface. At the top, a red bar says "Welcome to LiveChat". Below it, a message reads: "Welcome to our LiveChat! Please fill in the form below before starting the chat." There are two input fields: "Name:" and "E-mail:". At the bottom is a large green button labeled "Start the chat". At the very bottom of the interface, it says "Powered by LiveChat".

INSTALLATION GUIDES

Click a link below to view the Getting Started guides to help you install your product.

- [ComposerCloud+ Getting Started](#) (for subscription-based users)
- [EastWest Libraries Getting Started](#) (for perpetual license users).

1.3.2 WATCH OUR VIDEOS

Visit [EastWest Sounds on YouTube](#) for the latest:

- Installation and setup tutorials
- Product trailers and walkthroughs
- Software walkthroughs
- Composing tips and more!

1.3.3 COMMUNITY

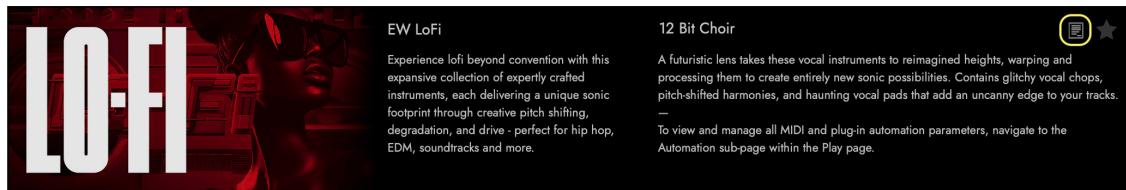
Visit [EastWest on Facebook](#) to get the latest announcements, and to join the discussion with other community members!

1.3.4 MANUALS

In addition to being available at the [EastWest Support Center](#), the latest User Manuals for each product, and the Opus Software Manual are accessible directly inside the Opus Software itself.

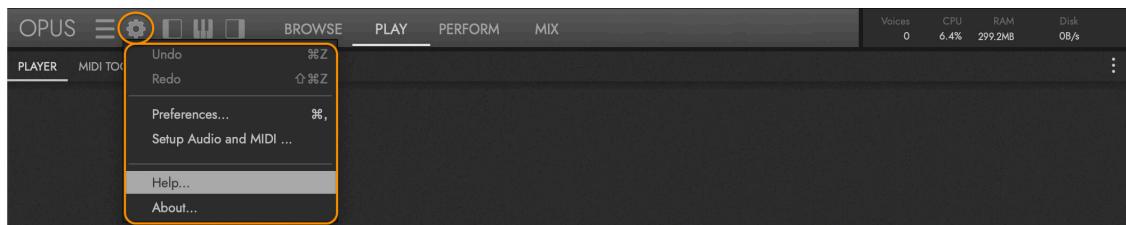
LO-FI USER MANUAL

The EW Lo-Fi User Manual is accessible by clicking on the **USER MANUAL BUTTON** located in the top-right corner of the Description Box, found in the Browse page. It focuses on topics that are specific to Lo-Fi.



OPUS SOFTWARE MANUAL

The Opus Software Manual is accessible by clicking on the **SETTINGS MENU BUTTON** in the Navigation Bar, and selecting the **HELP OPTION** at the bottom of the menu. It provides a comprehensive dive into all the features and controls available in Opus more broadly, beyond those specific to Lo-Fi.



MANUAL REFERENCES

Throughout this manual there are references to sections in the Opus Software Manual that expand upon the current topic in greater detail. For example:

OPUS SOFTWARE MANUAL | SECTION 1.1.3 PREFERENCES contains more about the settings available in the preferences window.

Interrelated topics in this manual are referenced in a similar manner, shown below.

CONTINUE READING | SECTION 2.1 LO-FI INSTRUMENTS for more information about the instruments available in this collection.

The numbering system identifies the chapter, section, and sub-section to identify the referenced section. For instance, the section numbered 1.1.3 means it's from chapter 1, section 1, sub-section 3.

Use either the included chapter links that are a standard in PDF formatted documents, or use the link in the top-left area of the header on each page to reach the Contents (< CONTENTS) of the manual.

2. DIVING DEEPER

A comprehensive look at the instruments included in Lo-Fi, and a breakdown of the parameters available to control the sound.

2.1 LO-FI INSTRUMENTS

Lo-Fi features 344 instruments in the following categories: bass, drums and percussion, guitars, keys and synths, leads, orchestral, pads, textures, and vocals.

2.2 LO-FI CONTROLS

A custom user interface puts an array of controls at your fingertips, giving you the power to shape important aspects of an instrument's sound.

2.1 LO-FI INSTRUMENTS

Each instrument in this collection has been meticulously crafted to push conventional boundaries and venture into new sonic territory. From the driving impact of bass and the raw energy of distorted drums, to the haunting textures of atmospheric pads and reimagined orchestral elements, every instrument has been shaped through pitch manipulation, saturation, and innovative processing.



INSTRUMENT CATEGORIES

Lo-Fi appears in alphabetical order in the Installed column, alongside other EastWest Libraries that have been installed. Click on the **EW LOFI** entry to reveal its categories.

- **BASS:** Drive the foundation of any modern production with the uncompromising presence of these low-end powerhouses. From menacing, distorted bass synths to gritty, speaker-rattling subs, these sounds are crafted for maximum impact.
- **DRUMS AND PERCUSSION:** Creatively processed drum kits transformed into new sonic territories by meticulously distorting and mangling each element with unique character. Energize your tracks with crunchy 808s, fractured snares, and glitched-out percussion.
- **GUITARS:** Heavily processed guitars venture into new territory that go beyond the traditional, all the while maintaining their plucked string character. Offers distorted electric riffs, bit-crushed strums, and degraded chord layers for a rebellious edge in any mix.

- **KEYS AND SYNTHS:** Cutting-edge sound design brings these synths, keys, and pianos into the modern realm, many of which feature stacked harmonies on a single note for instant inspiration. Includes detuned analog synths, degraded electric pianos, and glitchy harmonic stacks that deliver instant inspiration.
- **LEADS:** Bold and distinctive, these edgy, distorted leads will cut through any mix. Many feature rhythmic LFO modulation or arpeggiation to create dynamic motion. Includes searing distorted lines, pulsating leads, and aggressive, overdriven synths.
- **ORCHESTRAL:** Bridge the boundaries of classic orchestration and modern production with these fresh cross-genre instruments, many of which feature stacked sounds transposed across the keyboard to create vinyl-like samples. Expect fractured strings, degraded brass, and haunting woodwind textures that deliver cinematic depths with a dark twist.
- **PADS:** Hazy soundscapes and dark, gritty textures ready to fit into any track. Many feature rhythmic LFO modulation or arpeggiation to create dynamic motion, from dusty analog washes to evolving atmospheric layers to enrich your soundscapes.
- **TEXTURES:** Evocative atmospheres that add depth and character to any production, breathing life into music with a range of textural ambiances from degraded noise washes, to warped environmental tones.
- **VOCALS:** A futuristic lens takes these vocal instruments to reimagined heights, warping and processing them to create entirely new sonic possibilities. Contains glitchy vocal chops, pitch-shifted harmonies, and haunting vocal pads that add an uncanny edge to your tracks.

INSTRUMENTS AND PERFORMANCES

Lo-Fi contains both instruments and performances. While they appear the same in the Opus Browse page, performances load multiple instruments with a single file, whereas instrument files load a single instrument.

PLEASE NOTE: Performance files will always replace all instruments that are currently loaded in an instance of Opus. Instrument files, however, will only replace the currently selected instrument among all loaded instruments. This can result in a mix of the previously loaded performance with the newly loaded instrument. Please be aware of this and remove performances before loading an instrument, or simply load the instrument using the 'Replace All' button.

2.1.1 INSTRUMENT BROWSER

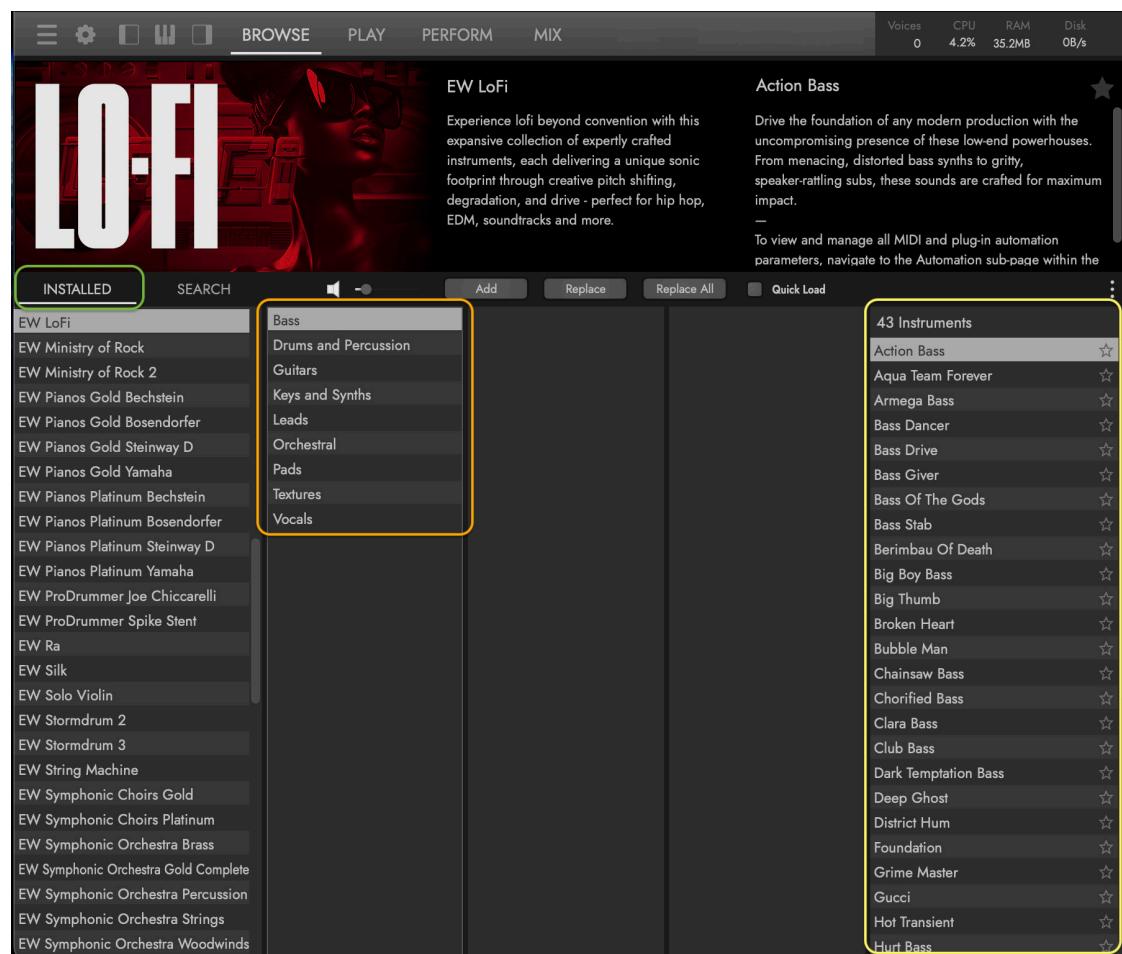
There are several ways to find instruments in the Browse page (shown below), including by browsing the library folders of a given product, narrowing down instrument selections using attribute tags, or by entering key words directly into the search field.

INSTALLED LIBRARIES

Click on the **INSTALLED MODE** button, then find 'EW LoFi' in the list of installed libraries that populate the left column in alphabetical order. Click on the entry to reveal the contents of Lo-Fi's instrument folder.

The **MAIN CATEGORIES** include Bass, Drums and Percussion, Guitars, Keys and Synths, Leads, Orchestral, Pads, Textures, and Vocals.

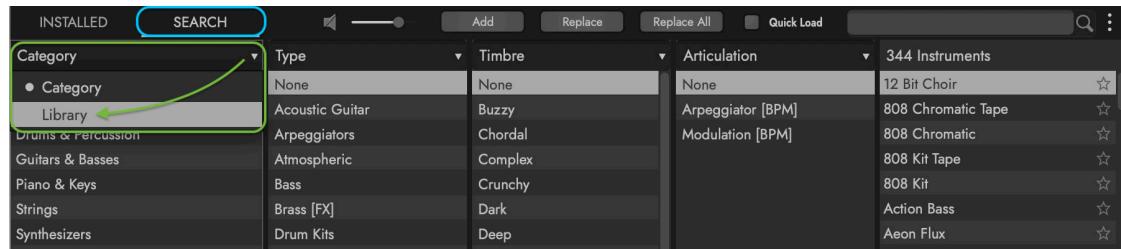
The **RESULTS LIST COLUMN** will populate with instruments once a category is selected. Double-click on an instrument to load it, which will also overwrite any previously loaded instrument.



SEARCH CATEGORIES

Click on the **SEARCH MODE** button to quickly narrow down the instruments by selecting attributes across a range of categories like Type, Style, Timbre, and more.

To begin, first click in the **ATTRIBUTES HEADER** and select the **LIBRARY ATTRIBUTE** from the drop-down menu to narrow the search to instruments within Lo-Fi.



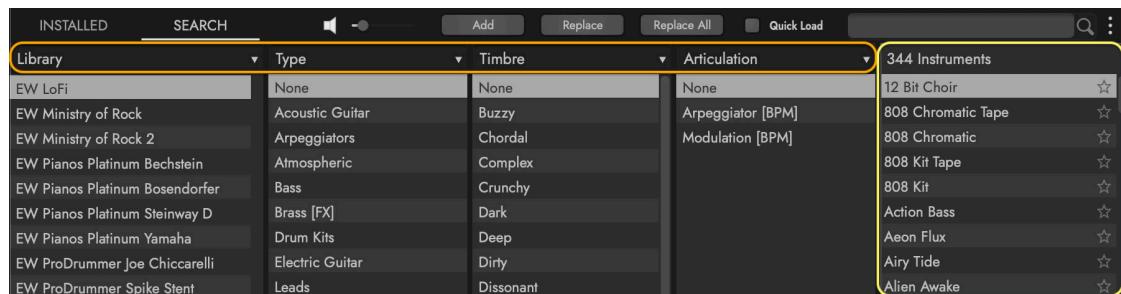
Use the **LIBRARY ATTRIBUTE** to find the ‘EW LoFi’ entry that appears in alphabetical order in the list of installed products (shown below).

Use the **TYPE ATTRIBUTE** to select one of Lo-Fi’s (category) types, some of which include Bass, Drum Kits, Electric Guitar, Plucks, and more. Notice that the Search mode allows for more refinement in the category types than are present in the Installed mode.

Use the **STYLE ATTRIBUTE** to select instruments that are tagged with Electronic and Hip Hop styles. Note that this categorization is more useful when searching for different styles across all EastWest Libraries, as individual libraries are tagged with the most relevant genre that applies.

Use the **ARTICULATION ATTRIBUTE** to narrow down instruments by how an instrument is played. In Lo-Fi, tags like ‘Arpeggiator [BPM]’ and ‘Modulation [BPM]’ are used to identify instruments that have tempo-synced rhythmic characteristics that use Arpeggiator and/or Modulation (like an LFO, or envelope).

Use the **TIMBRE ATTRIBUTE** to narrow down instruments by how they sound or feel, using descriptive words like ‘Warm’, ‘Buzzy’, and ‘Distorted’.

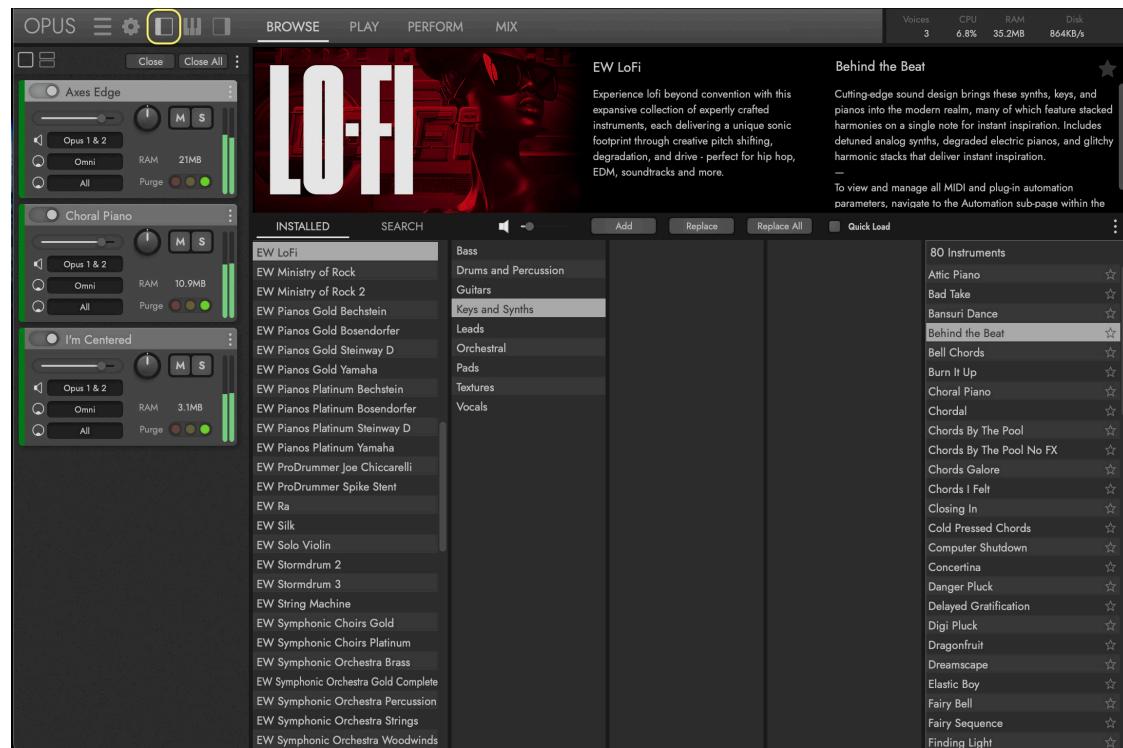


Instruments will populate the **RESULTS LIST COLUMN** based on what attribute tags are selected. Double-click on an instrument to load it, which will also overwrite any previously loaded instrument.

OPUS SOFTWARE MANUAL | SECTION 2.1 THE BROWSE PAGE contains more details on all the ways to find, preview, and load instruments.

2.1.2 INSTRUMENT RACK

To open and close the Instrument Rack that appears on the left side of the Opus user interface, click the **INSTRUMENT RACK TOGGLE** in the **NAVIGATION BAR**.



The Instrument Rack contains a few options at the top, and each loaded instrument appears in its own rack space with an **Instrument Name** and **ACTIVATION SWITCH** that runs along the top, and a variety of controls contained within.

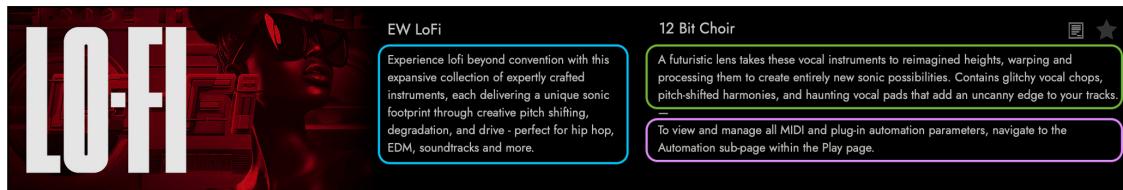
- Use the **RACK SIZE SELECTORS** located in the top-left corner to view instruments in a full-rack view (default) with all available controls, or a half-rack view that only contains the **ESSENTIAL CONTROLS** that includes volume, pan, mute and solo.
- Click the **CLOSE BUTTON** or the **CLOSE ALL BUTTON** to remove the currently selected instrument, or to remove all currently loaded instruments, respectively.
- Use the **INPUT / OUTPUT MENUS** to select (from the top) an instrument's audio output, MIDI channel assignment, and MIDI input port.
- Use the **PURGE CONTROL** to change an instrument's memory footprint. To remove it from memory, click the red button. The yellow light indicates notes are being loaded into memory as you play. Click the green button to load an instrument fully into memory.



2.1.3 DESCRIPTION BOX

The Description Box populates with information on the currently selected product and instrument. The **LIBRARY ARTWORK** populates on the left, with the **LIBRARY DESCRIPTION** in the center (printed below).

EW LO-FI Experience lofi beyond convention with this expansive collection of expertly crafted instruments, each delivering a unique sonic footprint through creative pitch shifting, degradation, and drive - perfect for hip hop, EDM, soundtracks and more.



Lo-Fi's **INSTRUMENT DESCRIPTIONS** appear on the right, divided into 2 parts.

The top half provides a **CATEGORY DESCRIPTION** detailing the category that the instrument originates from.

- **BASS:** Drive the foundation of any modern production with the uncompromising presence of these low-end powerhouses. From menacing, distorted bass synths to gritty, speaker-rattling subs, these sounds are crafted for maximum impact.
- **DRUMS AND PERCUSSION:** Creatively processed drum kits transformed into new sonic territories by meticulously distorting and mangling each element with unique character. Energize your tracks with crunchy 808s, fractured snares, and glitched-out percussion.
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- **TEXTURES:** Evocative atmospheres that add depth and character to any production, breathing life into music with a range of textural ambiences from degraded noise washes, to warped environmental tones.
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The lower half provides a **PROGRAMMING DESCRIPTION** detailing where to find more programming information.

- To view and manage all MIDI and plug-in automation parameters, navigate to the Automation sub-page within the Play page.

2.2 LO-FI CONTROLS

An array of controls populate Lo-Fi's main user interface, shown below.

To find it, click on the **PLAY PAGE** button in the Navigation Bar, then click on the **PLAYER SUB-PAGE** button in the Palette Menu (unless it's already selected by default).



In addition to the main Player sub-page, there are additional sub-pages within the Play page that feature an array of controls for the selected instrument. They are briefly described later in this chapter, and in more depth in the Opus software manual.

- **MIDI TOOLS SUB-PAGE** features a suite of MIDI Tools that offer a range of MIDI processing options including transposition, MIDI compressor, and more.
- **AUTOMATION SUB-PAGE** populates with controls that allow you to add movement to an instrument by automating their parameters in a DAW, or program your MIDI controller to control and record them into a DAW in real-time.
- **ARTICULATIONS SUB-PAGE** becomes available when an instrument that contains multiple articulations is loaded, like a keyswitch instrument. These instruments contain the abbreviated letters 'KS' in their instrument name. Please note that there are no such instruments in Lo-Fi.

2.2.1 PLAYER SUB-PAGE

The Player sub-page contains all the controls specific to Lo-Fi, including the MacroFX Pad, the HP/LP Filters, the 16-Step Arpeggiator, and much more.



The Lo-Fi user interface is divided into 4 main areas:

- The **CENTER AREA** (from top) features the Lo-Fi logo at the top, with a waveform visualizer below it. In the center is the MacroFX Pad where 1 of 4 effects can be selected to be controlled by the XY pad. A filter section containing both a high-pass (HP) and low-pass (LP) filter appears at the bottom.
- The **LEFT AREA** (from top) contains the master Gain and Velo (Velocity) knobs, with Portamento and Transpose controls below it. Continuing down, there is the Arpeggiator and a series of effects: Auto Pan, Stereo Double, Ring Mod, and Drive.
- The **RIGHT AREA** (from top) contains the Amplitude and Modulation Envelopes, the LFO (and STEP), and a series of effects: Chorus, Phaser, Delay, and Reverb.
- The **VIRTUAL KEYBOARD AREA** appears at the bottom. It shows the range of an instrument in white keys, while keys where no samples are mapped appear grayed out.

MAIN CONTROLS

Lo-Fi's main controls include a display area containing a visualizer, and controls that affect transposition and volume (gain). This includes the Amp Env and Velocity controls that affect volume, and coarse and fine tune controls that affect pitch.

- **DISPLAY AREA** is located in the center-top area of the user interface, and features the Lo-Fi logo at the top-center, and a waveform visualizer of the main instrument output below it.
- **GAIN SECTION** consists of the **GAIN** knob of the main instrument output that appears in the top-left corner of the user interface. It sits alongside a **VELO** knob that changes the degree to which MIDI Velocity affects overall volume (gain).
- **AMP ENV SECTION** contains a 4-stage envelope that controls volume over time. Use the ADSR [ATTACK, DECAY, SUSTAIN and RELEASE] knobs to change the shape of the volume curve over time.
- **TRANPOSE SECTION** includes both **COARSE** knob to adjust global tuning in semitone (half-step) increments, up to +/- 24 semitones (2 octaves) in either direction, and the **FINE** knob to change global tuning up to 100 cents in either direction (100 cents = 1 semitone).



MACRO FX PAD

The center of the Lo-Fi user interface features the MacroFX Pad. It contains a row of MacroFX buttons along the top and a dual-axis XY Pad below it to control the currently selected MacroFX.

Select the desired MacroFX (None, Stutter, Dream, Space, or Grit) by clicking one of the buttons that runs along the top of the MacroFX Pad.



Next, click on the XY control and move it around the pad area to control the X and Y parameters simultaneously, or use the X Remote (CC#15) and Y Remote (CC#16) to change the XY coordinates respectively.

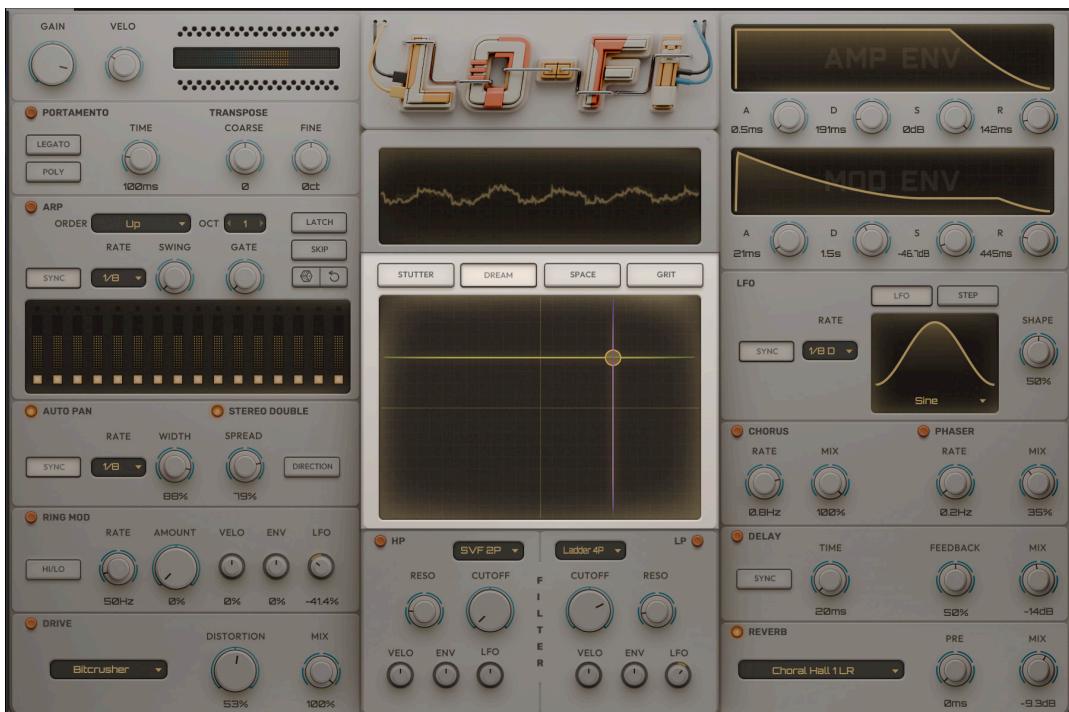
PLEASE NOTE: Only a single MacroFX can be active at a given time. All other MacroFX besides the currently selected one are disabled, with the last state of each of their XY coordinates saved. This allows you to audition a range of effects, or to switch between them in different parts of an arrangement.

CONTINUE READING | SECTION 2.2.3 AUTOMATION SUB-PAGE for more information about the ways to control the MacroFX Pad.

- **STUTTER** controls the **LFO RATE** along the X-axis, and the **LOWPASS FILTER CUTOFF** along the Y-axis.



- **DREAM** controls the **AUTO PAN RATE & WIDTH** and **STEREO DOUBLE AMOUNT** along the X-axis, and the **REVERB MIX AMOUNT** along the Y-axis.



- **SPACE** controls the **CHORUS RATE** along the X-axis, and the **DELAY FEEDBACK & MIX AMOUNTS** along the Y-axis.



- **GRIT** controls the **PHASER RATE** along the X-axis, and the **BITCRUSHER DECIMATE AMOUNT** along the Y-axis.



HP / LP FILTERS

The Filters in Lo-Fi include a High Pass (HP) Filter, and a Low Pass (LP) Filter. Each contain multiple filter types, Cutoff and Resonance controls, and their Filter Cutoff's can be modulated with 3 modulation sources: Velocity, Envelope, and LFO / Step LFO.



CUTOFF changes the filter's cutoff frequency. In HP filters, frequencies above the cutoff pass through, and in LP filters, frequencies below the cutoff pass through.

RESO changes the filter's resonance. Turning it up will create a narrow band producing a sharper, more resonant tone, and turning it down to broaden the frequency range for a smoother, more rounded tone.

HP (HIGHPASS) FILTER contains 2 selectable types, each of which allow frequencies above the cutoff frequency to pass through.

Click inside the drop-down menu, then click on a filter type to select it.

- **4-POLE SVF LP** is a 4-Pole HP (High Pass) SVF (state variable filter). Its 4-pole design produces a precise attenuation of frequencies with its steeper 24db per octave slope.

- **2-POLE SVF LP** is a 2-Pole HP (High Pass) SVF (state variable filter). Its 2-pole design produces a smoother attenuation of frequencies with a gentle 12db per octave slope.

LP (LOWPASS) FILTER contains 3 selectable types, all of which allow frequencies below the cutoff frequency to pass through.

Click inside the drop-down menu, then click on a filter type to select it

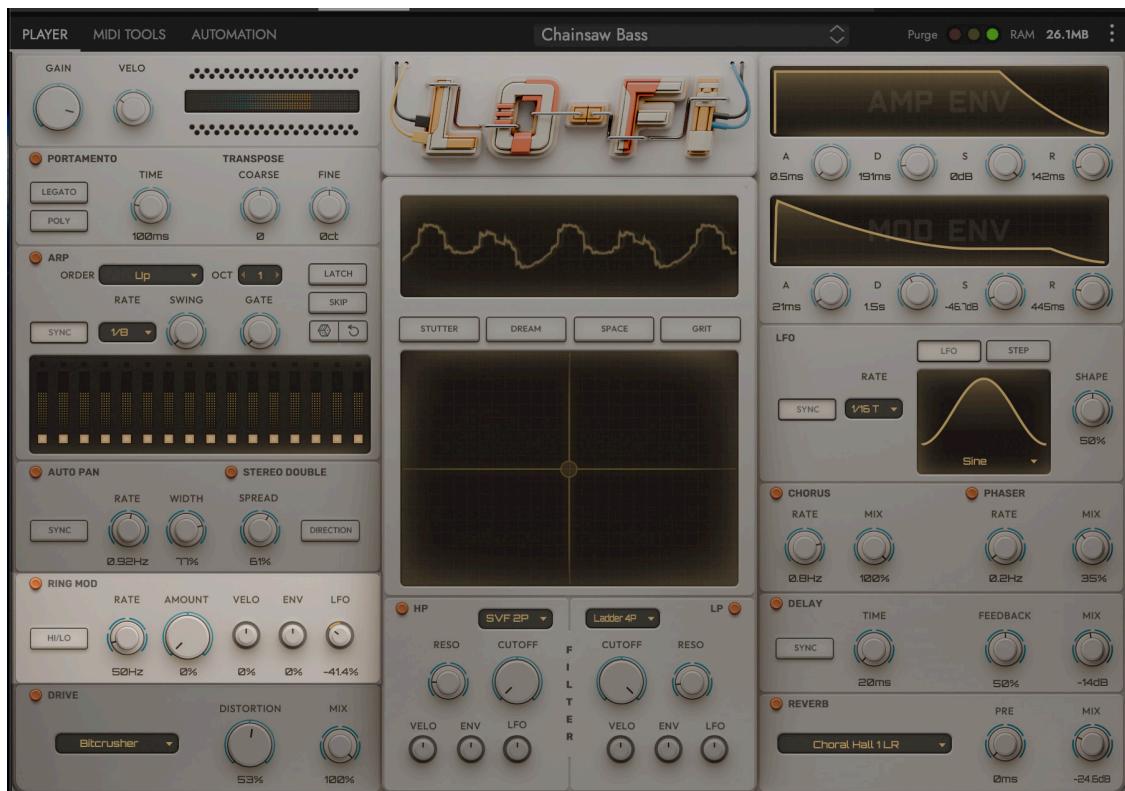
- **LADDER LP 4P (DEFAULT)** is a 4-pole LP (Low Pass) ladder filter that emulates those found on classic analog synths. Its 4-pole design produces a precise attenuation of frequencies with its steeper 24db per octave slope.
- **4-POLE SVF LP** is a 4-Pole LP (Low Pass) SVF (state variable filter) type. Its 4-pole design produces a precise attenuation of frequencies with its steeper 24db per octave slope.
- **2-POLE SVF LP** is a 2-Pole LP (Low Pass) SVF (state variable filter) type. Its 2-pole design produces a smoother attenuation of frequencies with a gentle 12db per octave slope.

MODULATION can be applied to the HP Filter Cutoff and LP Filter Cutoff parameters using any/all of the 3 small knobs labeled **VELO**, **ENV**, and **LFO**.

CONTINUE READING: ‘Mod Amount’ and ‘Mod Sources’ sections in the following pages for more details about the modulation options in Lo-Fi.

RING MOD

When applied to a sound, this effect can produce complex tonal characteristics that can be described as metallic or bell-like in nature. Ring modulation achieves this by multiplying two audio signals together to create new frequencies that are the sum and difference of the original signal's frequencies.



RATE controls the frequency (Hz) at which the carrier oscillator is running. It can be run at a low rate (default), or a high rate, to achieve different tonal characteristics.

- **LO RATE** operates between 0.01 Hz and 500 Hz. This is the default state, so make sure the 'Hi/Lo' button is off to work within this range of frequencies.
- **HI RATE** operates between 500 Hz and 16000 Hz. Turn the 'Hi/Lo' button on to enable this range of frequencies.

AMOUNT controls how much of the ring modulation signal is mixed with the original input signal between 0% and 100%.

MODULATION can be applied to the Ring Mod Amount parameter using any/all of the 3 small knobs labeled **VELO**, **ENV**, and **LFO**. Please see the 'Modulation Amount' and 'Modulation Sources' sections below for more information.

CONTINUE READING: 'Mod Amount' and 'Mod Sources' sections in the following pages for more details about the modulation options in Lo-Fi.

MOD AMOUNT

As referred to in the ‘HP / LP Filters’ and ‘Ring Mod’ sections above, modulation can be applied to these target parameters: **RING MOD AMOUNT** and **HP / LP CUTOFF FREQUENCY**.



The 3 small **MODULATION AMOUNT** knobs labeled **VELO**, **ENV**, and **LFO** can be used to add movement to the target parameter. They are bipolar knobs, so modulation intensity and direction (positive or negative) will influence the target parameter.

In the center position (0%) these knobs have no effect. By turning the knob to the right (up to 100%), modulation can be applied in a positive amount, and by turning the knob to the left (down to -100%), it can be applied in a negative amount.

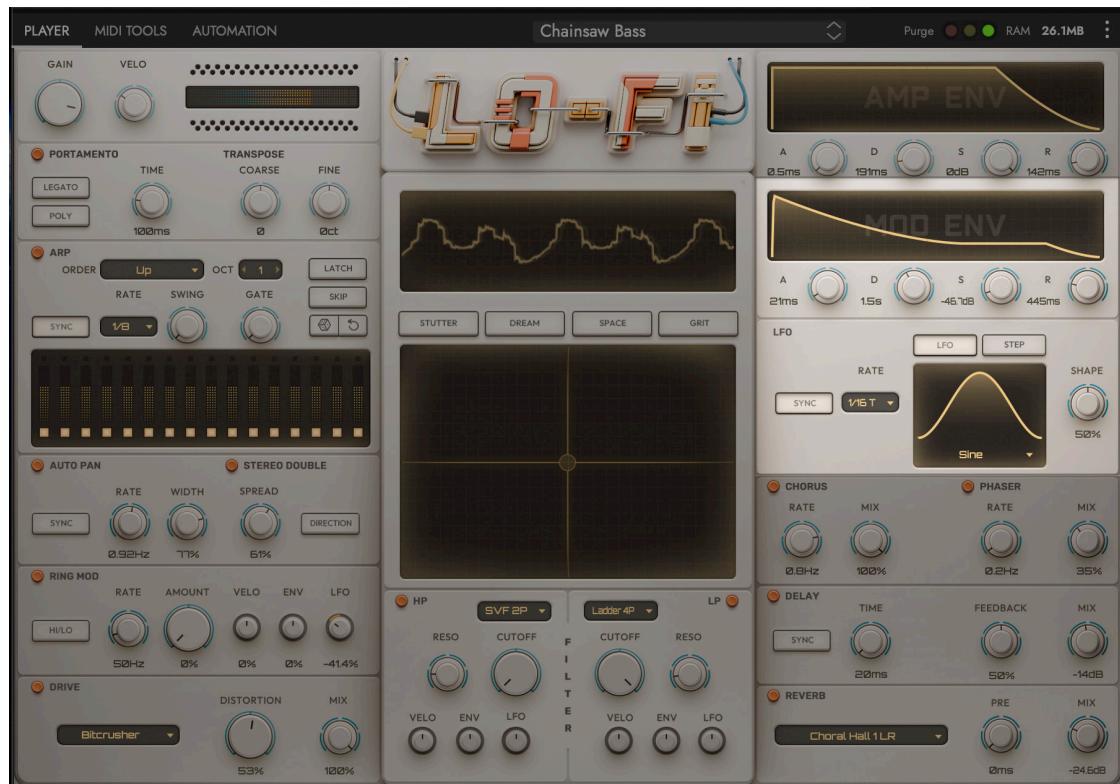
PLEASE NOTE: To reset knobs and return the modulation amount to zero, click them while holding the [Option/Alt] key.



MOD SOURCES

Modulation sources are the “invisible hands” behind the movement created when applying modulation to a target parameter (see ‘Mod Amount’ section above).

VELO applies modulation using **MIDI VELOCITY SOURCE**, the speed (velocity) at which a note is played on a MIDI controller key/pad between the values of 1 and 127. For instance, add positive **VELO** modulation to the LP Filter Cutoff so that the filter opens relative to how hard or soft you play the MIDI controller keys/pads.

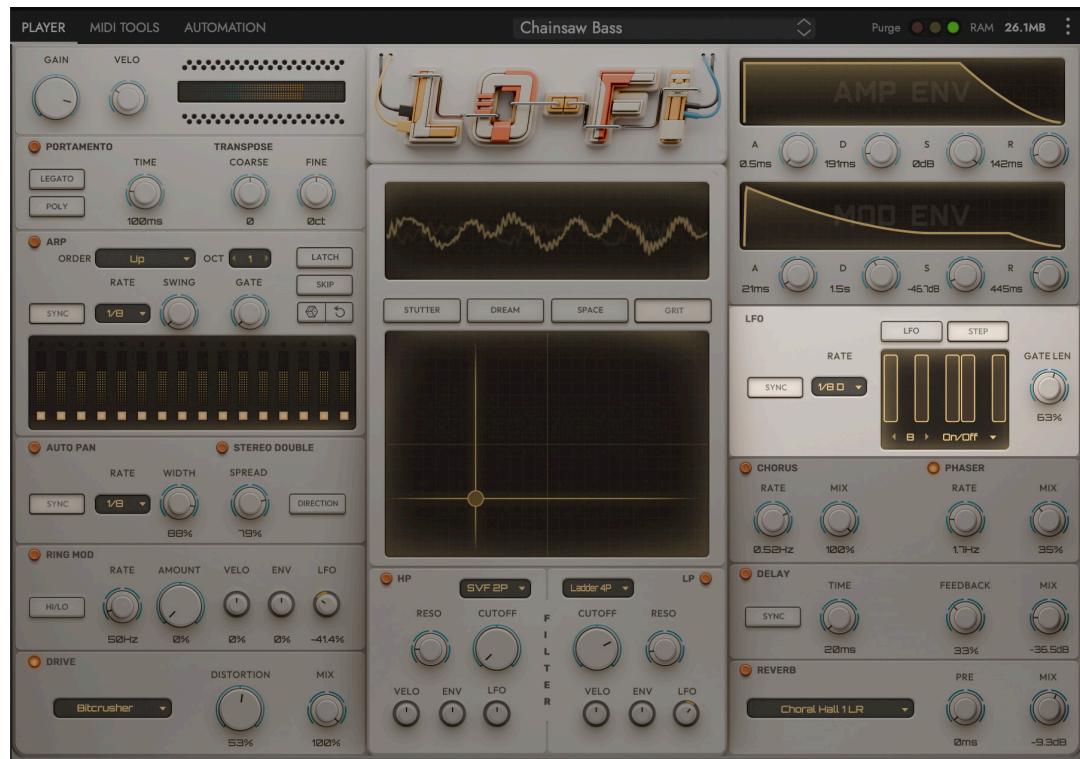


ENV uses the **MOD ENV SOURCE** to modulate the target parameter over the course of a 4-stage (ADSR) envelope. For example, with long Attack time on the Mod Env, add in some positive **ENV** modulation to create a slow, evocative LP Filter Cutoff sweep.

LFO uses the **LFO SOURCE** to modulate the target parameter. The LFO section contains both the LFO and STEP mod sources, only one of which can be selected at a given time.

- **LFO** is a low frequency oscillator with 4 selectable **WAVEFORMS** (Sine, Triangle, Saw, Pulse) with an additional **SHAPE** control to modify the waveforms. The **RATE** of speed with Sync On can be used to create a rhythmic pulse set to a sub-division of the DAW’s tempo (BPM), or with Sync Off to create a textural effect by using a high audio rate.
- **STEP** applies gated rhythms to the target parameter based on its step editor pattern. It offers an adjustable Gate length, and 3 different modes that affect how steps are entered into the editor: **ON/OFF** to create patterns where steps are either

present at full value or not at all, **QUANTIZED** to create patterns with 8 quantized velocity step values, and **CONTINUOUS** to create velocity steps of any value within the range.



ARPEGGIATOR

Lo-Fi offers a powerful 16-step Arpeggiator that features individual step control over note On/Off state and velocity scaling, as well as an array of controls that includes Order, Octave, Rate, Swing, and Gate.

PLEASE NOTE: Arpeggiator can be used in conjunction with Portamento (see next section) to add a pitch glide in between the individual notes of a pattern.



ORDER determines the note order (and directionality) of the arpeggiator pattern.

- **UP** goes from the lowest note to the highest note. When playing a 3-note C major chord, the arpeggiator will play notes C, E, and G, and then repeat the pattern.
- **DOWN** goes from the highest note to the lowest note. When playing a 3-note C major chord, the arpeggiator will play notes G, E, and C, and then repeat the pattern.
- **UP / DOWN** goes from the lowest note to the highest note, then back down. When playing a 3-note C major chord, the arpeggiator will play notes C, E, G, E, and then repeat the pattern.
- **INPUT ORDER** goes in order of the MIDI note input. When playing and holding notes C, then E, then G, it will play C, E, G in an upward direction. When playing and holding notes G, then E, then C, it will play notes G, E, C in a downward direction.
- **RANDOM** operates as the name suggests, randomly!

OCTAVE sets the octave range of the arpeggiator. With a value of 0, only the notes of a chord actually played will be arpeggiated. With a value of 1, the notes of a chord actually played will be arpeggiated, and then that pattern will continue an octave above. This pattern continues all the way up to a 5 octave range.

RATE sets the speed at which the arpeggiator pattern runs in beats per minute (BPM). It can be synced to a DAW's sequencer tempo, or run free of synchronization at a specified tempo between 20 BPM and 300 BPM.

- **SYNC (ON)** synchronizes the arpeggiator rate to a DAW's sequencer tempo (BPM). Select the desired sub-division of that tempo by clicking in the drop-down menu, and then selecting standard or triplet sub-divisions between 1/4 note and 1/32 note.
- **SYNC (OFF)** runs the arpeggiator free from the DAW's sequencer tempo (BPM). Instead, use the Arpeggiator Rate knob to dial in a specific tempo between 20 BPM and 300 BPM, while being free from host synchronization.

SWING controls the rhythmic feel of the arpeggiator, adding an element of human feel to a pattern. With no Swing added (0%), the steps of the sequence fall strictly on the beat sub-divisions. As Swing is increased (up to 100%), notes are shifted forward (later) off the beat sub-division, creating everything from a subtle shuffled feel, to more dramatic syncopated rhythms.

GATE controls the length of notes in the arpeggiator pattern. At the lowest Gate setting, notes are at their shortest length and steadily grow in length as the Gate setting is increased, allowing everything from staccato-like expression to longer, sustained notes. When used in combination with the Portamento Time parameter, very interesting patterns can develop with pitch gliding between notes of various lengths.

LATCH mode will continue to play the arpeggiator pattern after the initial MIDI note on messages have been released (without the need to hold or sustain those notes). New MIDI note on messages will reset the arpeggiator pattern based on the new input.

SKIP changes sequencer patterns that have inactive steps. Instead of playing an inactive step with silence, Skip will only play active steps, passing over the inactive step as if it didn't exist, changing the overall sequence of the pattern.

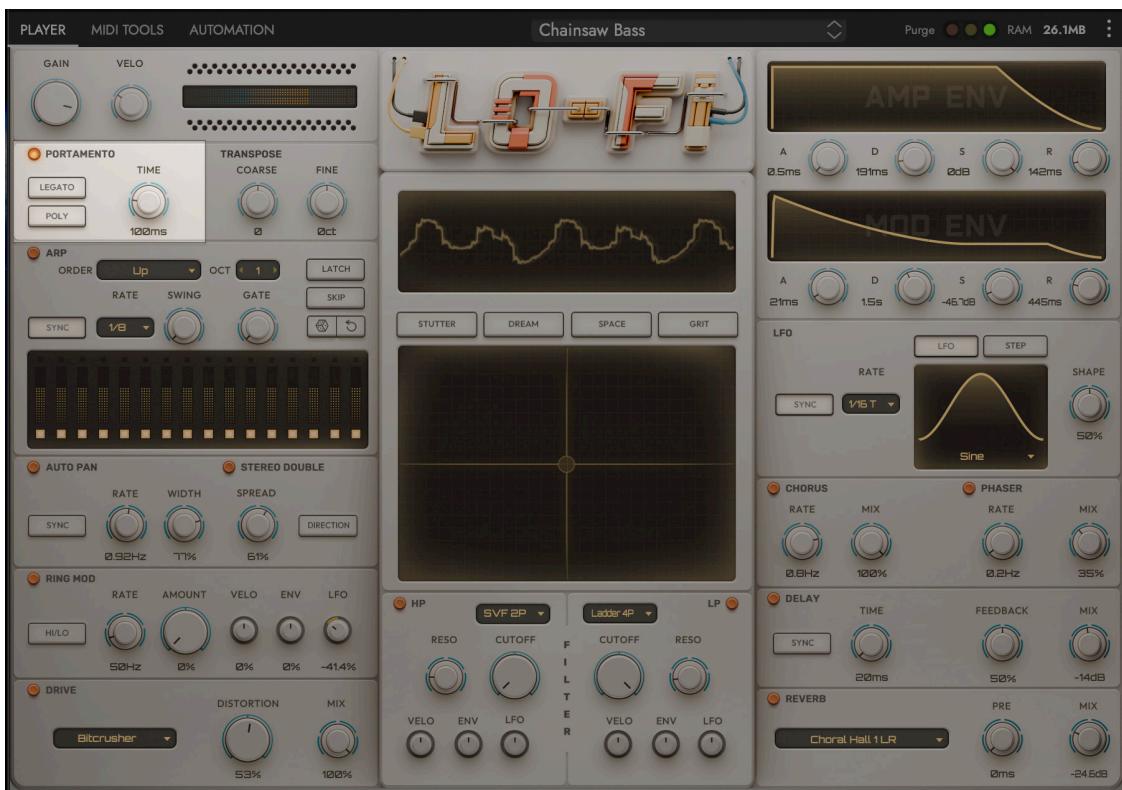
RANDOM appears as a dice icon, and is an excellent way to stumble on inspiration by generating arpeggiator patterns by changing the active/inactive state and velocity of the steps, as well as a number of other parameters including Order, Octave (+/- 3), Sync Rate, Swing and Gate.

RESET appears as a circular arrow icon, and sets the sequencer pattern and Gate parameter to a default state. It turns all steps in a sequencer to an active state, unifies their velocity to a standard value, and sets the Gate parameter to a default 100%.

PORRAMENTO

Portamento is an effect that creates a slide in pitch between 2 notes at a defined length. In its default state, the slide in pitch occurs between the last note played and the next note played, regardless of whether the notes are played in a legato (connected) style or not.

PLEASE NOTE: This effect can be used with or without the Arpeggiator engaged. When used in conjunction with the arpeggiator, the pitch slide occurs between the note of the arpeggiator pattern.



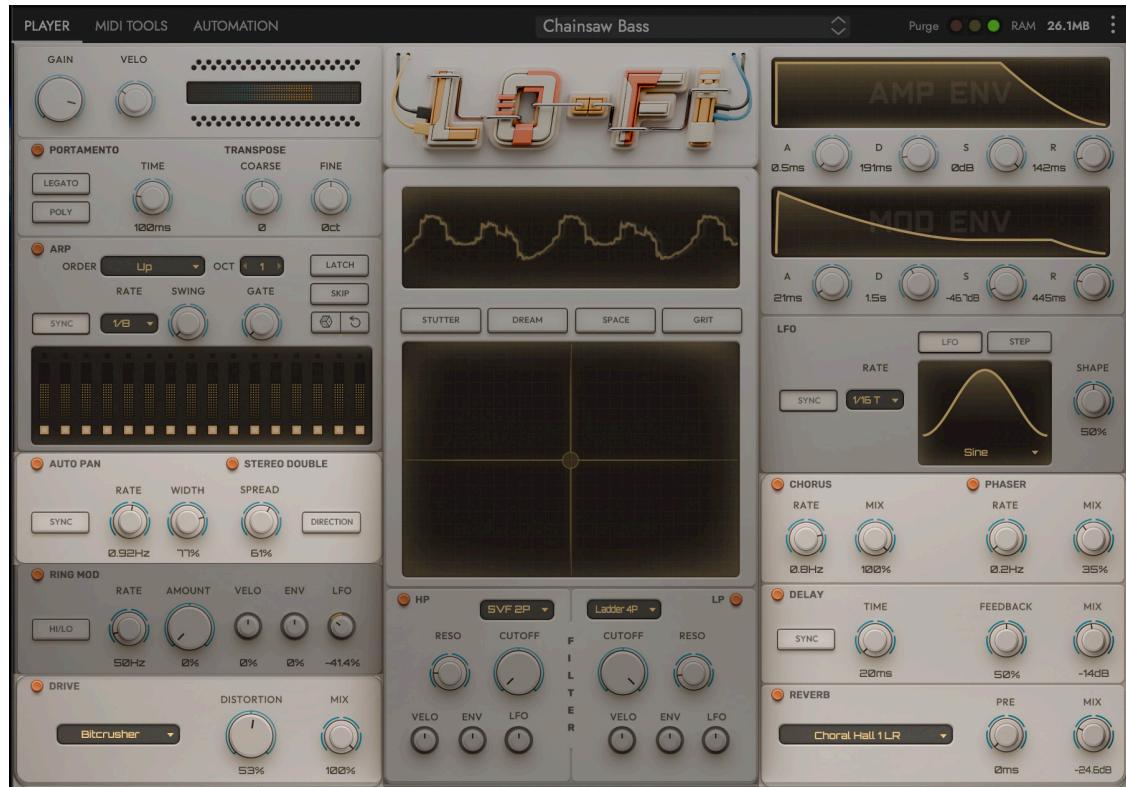
LEGATO mode changes the portamento behavior so that a slide in pitch only occurs when 2 notes are played in a connected (legato) fashion. Notes played distinctly apart from each other will contain no slide in pitch between them when this mode is enabled.

POLY mode enables the use of portamento when playing polyphonically, allowing pitch slides to occur within chordal figures. When enabled in conjunction with the Legato mode described above, the portamento will only engage when notes are played in a connected fashion. When enabled on its own, this mode will slide from the previously played notes to the newly played ones, regardless of whether they are played in a connected fashion or not.

TIME parameter changes the length of the pitch slide between 5 milliseconds (ms) and 2.5 seconds (s). Create a short, agile pitch slide for a subtle connectedness between notes, or a longer, exaggerated slide in pitch for an extreme effect.

EFFECTS

Lo-Fi offers a wide range of effects, from stereo effects like Auto Pan and Stereo Double, to mixer effects inserted on the Master instrument channel like Drive, Chorus, and Phaser. Polish off your mix with Delay and Reverb available as send effects.



AUTO PAN is an effect that automates the pan position with a sine LFO modulator. The Rate can be synced to tempo using sub-divisions between 1/32nd triplet note and 32 bars, or run free of tempo constraints at an audio rate up to 65 Hz. Use the **WIDTH KNOB** to adjust the width of the pan position between 0% - 100%.

STEREO DOUBLE widens the stereo image by adding in a source from either the right or left side of the stereo image.

PLEASE NOTE: The Stereo Double effect will only work when the **CHANNEL SOURCE** is set to 'Stereo' in the Master section, which is the default setting.

DRIVE includes 3 effects in 1: Bitcrusher, Distortion, and Fuzz. Click in the drop-down menu and select one from the menu to begin. Next, use the 'Distortion' knob to dial in the intensity of the effect, and the 'Mix' knob to blend in the distorted signal with the original signal, with 0% having no effect and 100% producing a fully effected signal.

- **BITCRUSHER** produces everything from mild warmth to harsh, aggressive distortion by reducing the resolution of the audio.

- **DISTORTION** drives your signal through 1 of 3 classic distortion types (Classic, Tube 1, Tube 2) with additional low and high boost.
- **FUZZ** adds an aggressive style of distortion to your signal by pushing it into clipping territory.

CHORUS is a multi-mode Ensemble Chorus that adds thickness and shimmer to your sound. It features 3 modes: 2 that emulate the sound of highly-prized chorus units found on the vintage Solina String Ensemble and Roland Vocoder Plus synthesizers, and a 'Modern' mode for a cleaner sound.

PHASER emulates the coveted sound of vintage multi-stage phaser pedals, and includes an extra stage for adding feedback.

TREMOLO uses a variety of waveshapes to modulate the amplitude, creating a rhythmic and/or trembling effect. The rate of modulation can either be synced to tempo or run freely at an audio rate up to 32 Hz.

DELAY is a send effect featuring the EP-1 Delay that is modeled after the Echoplex Delay designed in 1959. It operates in 2 configurations. The 'Pre-Reverb' configuration features the EP-1 Delay in series with the Reverb, creating washed out delay sound. The 'Delay Channel' configuration features the EP-1 Delay on independent channel in parallel with the Reverb, for more separation between the delay and reverb effects.

REVERB is a send effect that features our celebrated convolution reverb, which uses impulse responses (IRs) containing the characteristics of a particular space, and applies (convolves) it with the input signal to simulate that sound of playing that instrument in the given space.

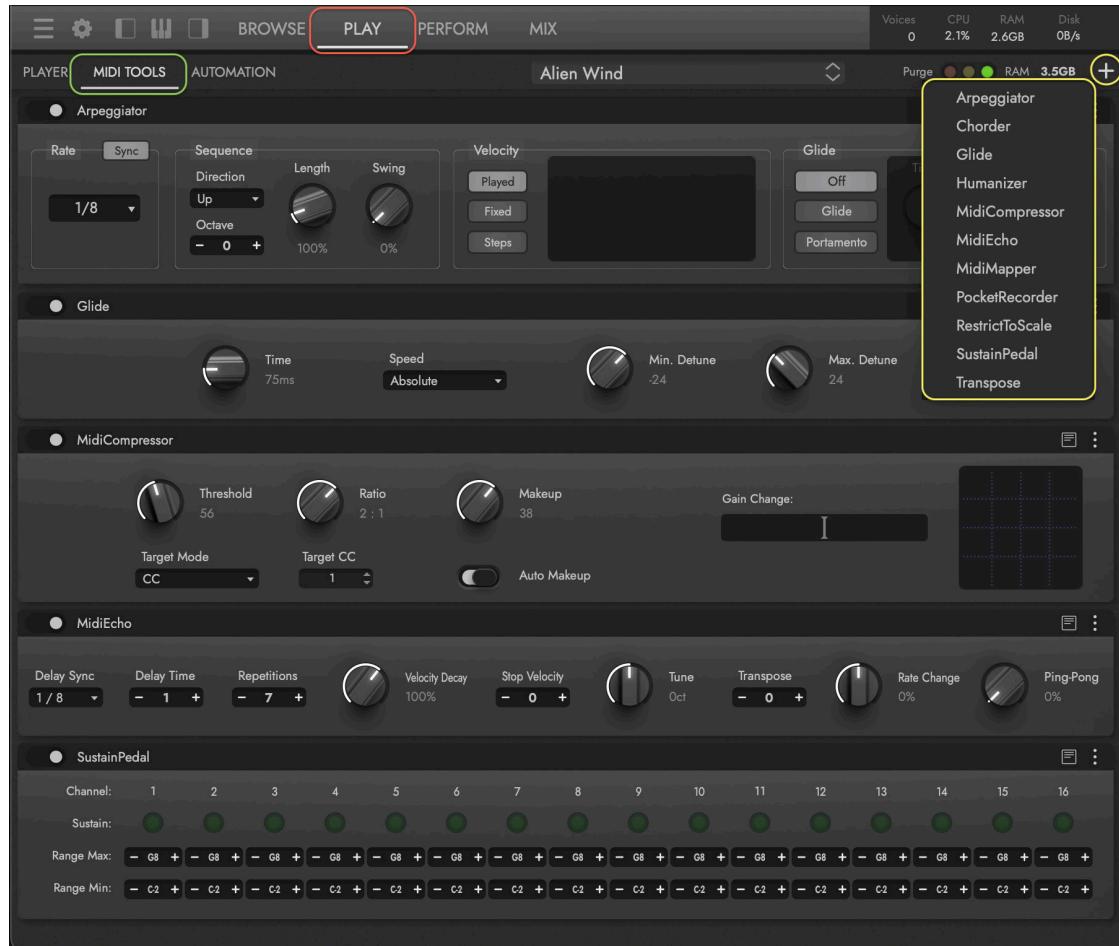
OPUS SOFTWARE MANUAL | SECTION 2.4.3 EFFECTS LIST contains more details about all the powerful effects suite included in Opus.

2.2.2 MIDI TOOLS SUB-PAGE

A suite of MIDI Tools are available that offer a range of MIDI processing options.

Click on the **PLAY PAGE** button in the Navigation Bar, then click on the **MIDI TOOLS SUB-PAGE** button in the Palette Menu.

Click in the **MIDI TOOLS MENU** to open a menu with a list of available MIDI Tools, then click on one to load it.



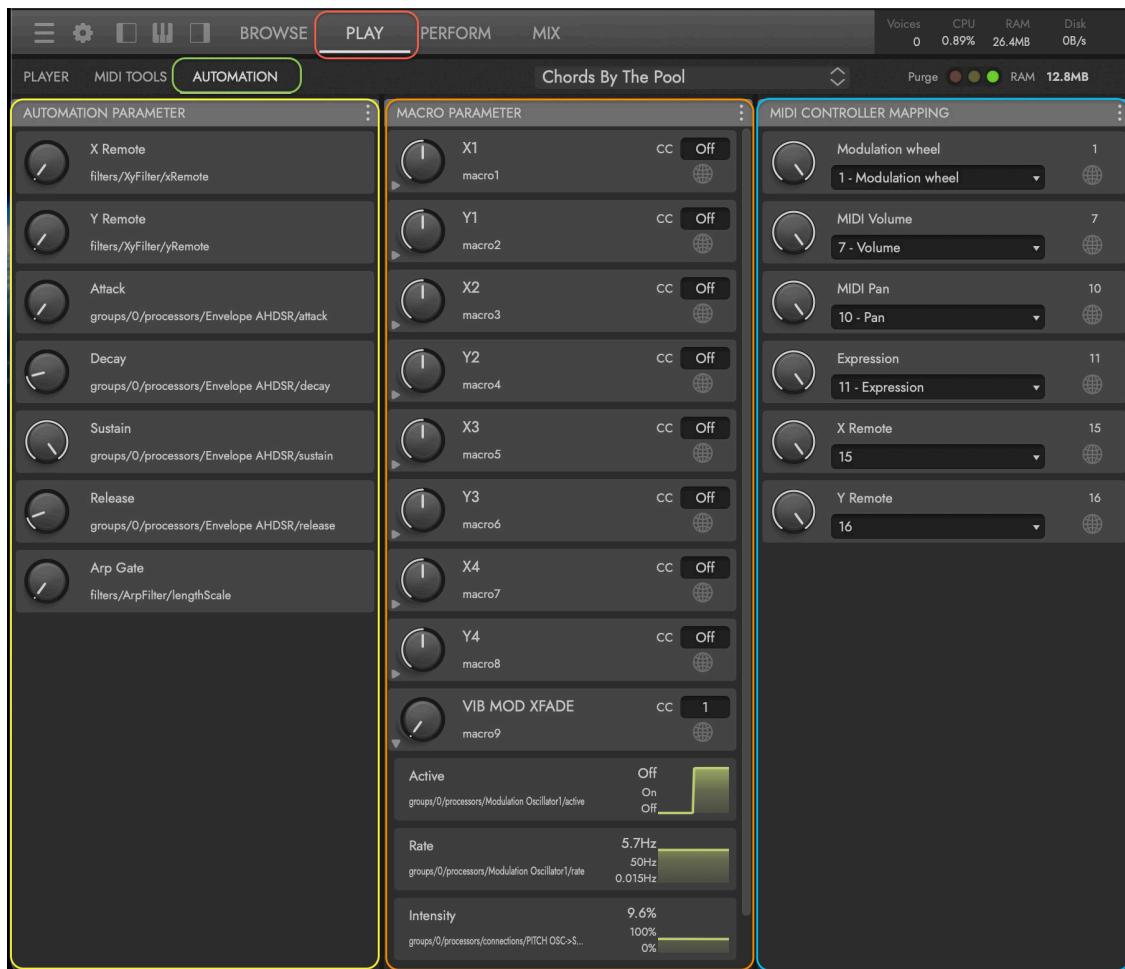
OPUS SOFTWARE MANUAL | SECTION 2.2.2 MIDI TOOLS SUB-PAGE contains more information about each MIDI Tool and all the options available in this sub-page.

2.2.3 AUTOMATION SUB-PAGE

Add movement to an instrument by automating its parameters in a DAW, or program your MIDI controller to control and record those parameter changes in real-time.

Click on the **PLAY PAGE** button in the Navigation Bar, then click on the **AUTOMATION SUB-PAGE** button in the Palette Menu.

The **AUTOMATION PARAMETERS** column populates with controls that appear in the plugin automation lane of your DAW. In addition to the default selection, more can be added by clicking in the ellipsis menu at the top-right of the column, or by right-clicking on a control in the Player sub-page and selecting ‘Add Automation’ from the pop-up menu.



The default set of controls that appears in this column are outlined below.

- **X REMOTE (CC#15)** knob controls the parameters mapped to the X coordinate (the horizontal axis) of the currently selected MacroFX, which is selected by the XY Mode control described above.
- **Y REMOTE (CC#16)** knob controls the parameters mapped to the Y coordinate (the vertical axis) of the currently selected MacroFX, which is selected by the XY Mode control described above.

- **AMP ENV ADSR** knobs respectively control the Attack, Decay, Sustain and Release parameters of the Amplitude Envelope (Amp Env).
- **ARP GATE** knob controls the Arpeggiator Gate parameter, which can shorten or elongate the arpeggiator note length.

The **MACRO PARAMETERS** column populates with controls that appear in the MIDI controller lane of your DAW. In Lo-Fi, a number of custom Macro Parameters are available and outlined below.

CONTINUE READING | SECTION 2.2.1 PLAYER SUB-PAGE ‘MacroFX Pad’ section for more information about the parameters controlled by the MacroFX Pad.

- **MACRO FX PAD** parameters correspond to the MacroFX Pad in the Player sub-page. Each MacroFX has dual-axis (X/Y) control: Stutter (X1/Y1), Dream (X2/Y2), Space (X3/Y3), and Grit (X4/Y4).
- **VIB MOD XFADE** is assigned to the Mod Wheel (CC#1) by default, unless a custom Mod Wheel has been assigned in its place. The Vib Mod Xfade adds vibrato to an instrument with pitch modulation with a momentary style of vibrato where there is no active effect between values 1 and 64, and the effect becomes active between values 65 and 127. Change the Rate and Intensity values within the Macro Parameter to alter the speed and depth of vibrato.

The **MIDI CONTROLLER MAPPING** column populates with MIDI CCs that are available for the selected instrument, allowing you to re-map them to a different MIDI Continuous Controller (CC) assignments.

OPUS SOFTWARE MANUAL | SECTION 2.2.3 AUTOMATION SUB-PAGE contains more information about all the features available in the Automation sub-page.

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